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Indian Standard

DIMENSIONS FOR COUPLING ARRANGEMENTS BETWEEN TOWING VEHICLE AND TRAILER

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DIMENSIONS FOR COUPLING ARRANGEMENTS BETWEEN TOWING VEHICLE AND TRAILER

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Indian Standard

DIMENSIONS FOR COUPLING ARRANGEMENTS BETWEEN TOWING VEHICLE AND TRAILER

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 27 February 1981, after the draft finalized by the Transport Tractors and Trailers Sectional Committee had been approved by the Marine, Cargo Movement and Packaging Division Council.

0.2 Dimensional limits for the height of coupling attachments both on the towing vehicle and the towed vehicle are necessary to achieve proper alignment and interchangeability of different makes of trailers with different tractors. Hence the need for this standard.

1. SCOPE

1.1 This standard specifies height of coupling attachments between towing vehicle and trailer, and trailer to trailer for their proper alignment and interchangeability and to facilitate movement of such combination of vehicles on the road.

1.2 This standard does not cover agricultural tractors and trailer and semi-trailers.

2. DEFINITIONS

2.0 Besides the definitions given in IS:7774 (Part II)-1975*, the following definitions shall apply.

2.1 Height of Towing Attachment — The height 'h_1' from the supporting plane to the attachment. In other words, the distance from the supporting plane:

a) for a shackle, to the horizontal plane equidistant from the two inner surfaces of the shackle with the pin in vertical position (*see* Fig. 1).

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*Glossary of terms relating to transport tractors and trailers: Part II Dimensions and weights.

b) for a hook, to the centre of meridian section of the toroidal ring, the axis of this section being vertical (*see* Fig. 2).

2.2 Height of Drawbar Articulation Axis of Trailer — The height 'h_2' from the supporting plane to the centre of the towing attachment fixed to the trailer.

3. LAYOUT OF TOWING ATTACHMENTS

3.1 Towing Attachments — The general arrangement of the towing attachments fixed to the towing vehicle and the trailer shall be as shown in Fig. 1 and 2.

3.2 Dimensions — The dimensional limits shown in Table 1 shall apply to the laden or unladen vehicles.

TABLE 1 DIMENSIONAL LIMITS FOR LADEN OR UNLADEN VEHICLES

TOTAL LADEN MASS OF VEHICLE OR TRAILER in tonnes (1)	HEIGHT OF TOWING ATTACHMENTS ON TOWING VEHICLES 'h_1' mm (2)	HEIGHT OF DRAWBAR ARTICULATION AXIS ON TRAILER 'h_2' mm (3)
5 to 10	750	725
10 to 16	900	825
Above 16	950	875

NOTE — The tolerances on the height 'h_1' shall be ±150 mm and on the height 'h_2' ±100 mm.

3.3 The distance between the towing attachment axis on the towing vehicle and the rear of the towing vehicle shall not be more than 300 mm.

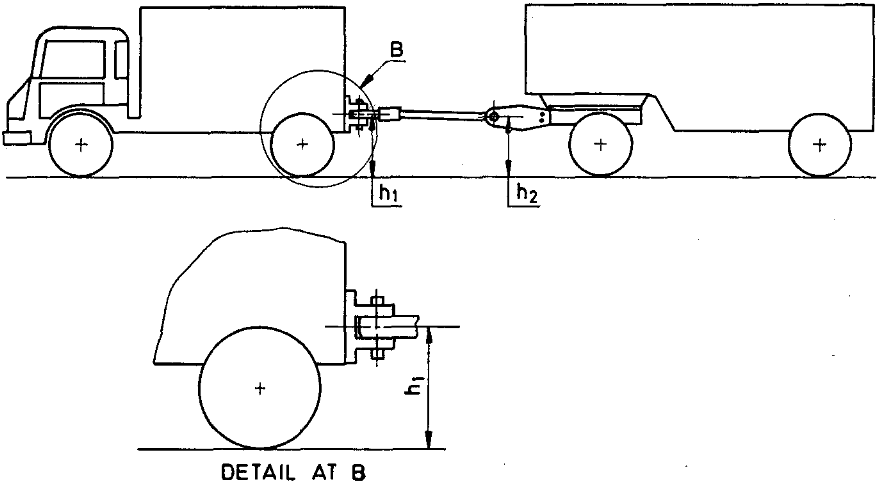

FIG. 1 MEASUREMENT OF h_1 AND h_2 WITH SHACKLE ATTACHMENT

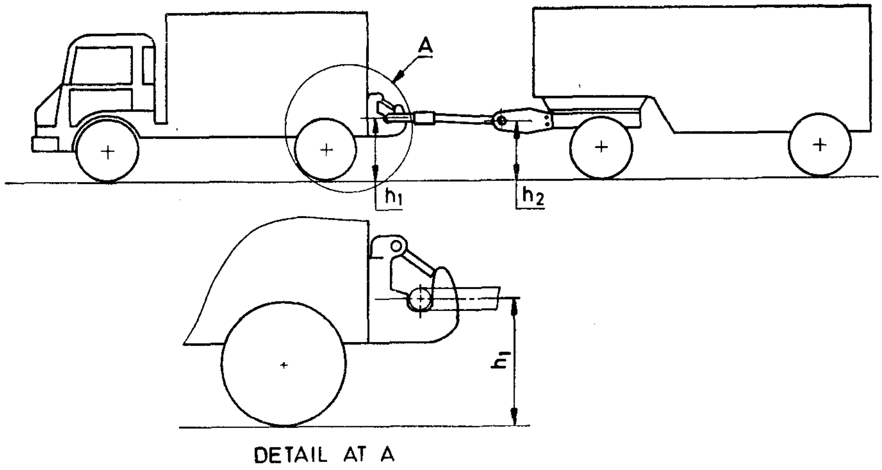

FIG. 2 MEASUREMENT OF h_1 AND h_2 WITH TOWING HOOK ATTACHMENT

INTERNATIONAL SYSTEM OF UNITS (SI UNITS)

Base Units

Quantity	*Unit*	*Symbol*
Length	metre	m
Mass	kilogram	kg
Time	second	s
Electric current	ampere	A
Thermodynamic temperature	kelvin	K
Luminous intensity	candela	cd
Amount of substance	mole	mol

Supplementary Units

Quantity	*Unit*	*Symbol*
Plane angle	radian	rad
Solid angle	steradian	sr

Derived Units

Quantity	*Unit*	*Symbol*	*Definition*
Force	newton	N	1 N=1kg. m/s^2
Energy	joule	J	1 J=1 N.m
Power	watt	W	1 W=1 J/s
Flux	weber	Wb	1 Wb=1 V.s
Flux density	tesla	T	1 T=1 Wb/m^2
Frequency	hertz	Hz	1 Hz=1 c/s (s^{-1})
Electric conductance	siemens	S	1 S=1 A/V
Electromotive force	volt	V	1 V=1 W/A
Pressure, stress	pascal	Pa	1 Pa=1 N/m^2